

List of Claims:

1-50. (Cancelled)

51. (Currently amended) A fibrous nonwoven mat having a basis weight of about 2.45 +/- 0.75 lbs/100 sq. ft., unique high flame resistance and unexpected excellent tensile strength, flex and recovery properties after scoring and folding comprising a blend of fibers comprising about 80 to about 92 weight percent chopped glass fibers having a diameter in the range of about 13 to about 17.5 microns and a length in the range of about 0.5 to about 1.25 inches and about 5 to about 20 percent man-made polymer fibers in a nonwoven web, the fibers in the web being bound together by a binder that is at least partially cured and comprises before drying and curing, a homopolymer or a copolymer of polyacrylic acid and a polyol, with or without a polycarboxy polymer, the binder being present in the mat in an amount of about 10 to about 35 wt. percent of the mat, the mat having a Taber Stiffness of at least about 50 gram centimeters and passing the National Fire Protection Association's (NFPA) Method #701 Flammability Test.

52. (Original) The mat according to claim 51, wherein the average molecular weight of the polyacrylic acid polymer is about 3,000 or less.

53. (Original) The mat according to claim 51, wherein the polyol is triethanolamine.

54. (Original) The mat according to claim 52, wherein the polyol is triethanolamine.

55. (Original) The mat of claim 51 wherein the man-made polymer fibers are polyester fibers.

56. (Original) The mat of claim 52 wherein the man-made polymer fibers are polyester fibers.

57. (Original) The mat of claim 53 wherein the man-made polymer fibers are polyester fibers.

58. (Original) The mat of claim 54 wherein the man-made polymer fibers are polyester fibers.

59. (Previously presented) The mat of claim 51 wherein the binder content is in the range of about 15 to about 30 wt. percent.

60. (Original) The mat of claim 59 wherein the polymer fibers are polyester fibers and the glass fibers have an average fiber diameter in the range 16 +/- 1 micron.

61. (Original) The mat of claim 60 wherein the polyester fibers are present in the blend in amounts between about 8 and 16 wt. percent.

62. (Original) The mat of claim 61 wherein the polyester fibers are about 1.5 denier and are about 0.25 +/- .07 inch long.

63. (Previously presented) The mat of claim 52 wherein the binder content is in the range of about 15 to about 30 wt. percent.

64. (Original) The mat of claim 63 wherein the polymer fibers are polyester fibers and the glass fibers have an average fiber diameter in the range 16 +/- 1 micron.

65. (Original) The mat of claim 64 wherein the polyester fibers are present in the blend in amounts between about 8 and 16 wt. percent.

66. (Original) The mat of claim 65 wherein the polyester fibers are about 1.5 denier and are about 0.25 +/- .07 inch long.

67. (Previously presented) The mat of claim 53 wherein the blend comprises about 84 to about 92 wt. percent glass fibers and about 8 to about 16 wt. percent man-made polymer fibers and the binder content is in the range of about 20 to about 30 wt. percent.

68. (Original) The mat of claim 67 wherein the polymer fibers are polyester fibers and the glass fibers have an average fiber diameter in the range 16 +/- 1 micron.

69. (Currently amended) The mat of claim 68 wherein the polyester fibers are about 1/4 +/- 0.07 inch long and have a denier of about 1.5 present in the blend in amounts between about 8 and 16 wt. percent.

70. (Cancelled)

71. (Currently amended) The mat of claim 51 wherein the binder is cured sufficiently that the wet tensile strength divided by the dry tensile strength times 100 equals at least about 35 percent and the length of the glass fibers is about 0.7 to about 1.1 inch.

72. (Currently amended) The mat of claim 52 wherein the binder is cured sufficiently that the wet tensile strength divided by the dry tensile strength times 100 equals at least about 35 percent and the length of the glass fibers is about 0.7 to about 1.1 inch.

73. (Currently amended) The mat of claim 53 wherein the binder is cured sufficiently that the wet tensile strength divided by the dry tensile strength times 100 equals at least about 35 percent and the length of the glass fibers is about 0.7 to about 1.1 inch.

74. (Currently amended) The mat of claim 54 wherein the binder is cured sufficiently that the wet tensile strength divided by the dry tensile strength times 100 equals at least about 35 percent and the length of the glass fibers is about 0.7 to about 1.1 inch.

75. (Currently amended) The mat of claim 55 wherein the binder is cured sufficiently that the wet tensile strength divided by the dry tensile strength times 100 equals at least about 35 percent and the length of the glass fibers is about 0.7 to about 1.1 inch.

76. (Currently amended) The mat of claim 56 wherein the binder is cured sufficiently that the wet tensile strength divided by the dry tensile strength times 100 equals at least about 35 percent and the length of the glass fibers is about 0.7 to about 1.1 inch.

77. (Original) The mat of claim 57 wherein the binder is cured sufficiently that the wet tensile strength divided by the dry tensile strength times 100 equals at least about 35 percent.

78. (Original) The mat of claim 58 wherein the binder is cured sufficiently that the wet tensile strength divided by the dry tensile strength times 100 equals at least about 35 percent.
79. (Original) The mat of claim 59 wherein the binder is cured sufficiently that the wet tensile strength divided by the dry tensile strength times 100 equals at least about 35 percent.
80. (Original) The mat of claim 60 wherein the binder is cured sufficiently that the wet tensile strength divided by the dry tensile strength times 100 equals at least about 35 percent.
81. (Original) The mat of claim 61 wherein the binder is cured sufficiently that the wet tensile strength divided by the dry tensile strength times 100 equals at least about 35 percent.
82. (Original) The mat of claim 62 wherein the binder is cured sufficiently that the wet tensile strength divided by the dry tensile strength times 100 equals at least about 35 percent.
83. (Original) The mat of claim 63 wherein the binder is cured sufficiently that the wet tensile strength divided by the dry tensile strength times 100 equals at least about 35 percent.
84. (Original) The mat of claim 64 wherein the binder is cured sufficiently that the wet tensile strength divided by the dry tensile strength times 100 equals at least about 35 percent.
85. (Original) The mat of claim 65 wherein the binder is cured sufficiently that the wet tensile strength divided by the dry tensile strength times 100 equals at least about 35 percent.
86. (Original) The mat of claim 66 wherein the binder is cured sufficiently that the wet tensile strength divided by the dry tensile strength times 100 equals at least about 35 percent.
87. (Original) The mat of claim 67 wherein the binder is cured sufficiently that the wet tensile strength divided by the dry tensile strength times 100 equals at least about 35 percent.
88. (Original) The mat of claim 68 wherein the binder is cured sufficiently that the wet tensile strength divided by the dry tensile strength times 100 equals at least about 35 percent.

89. (Previously presented) [71.] The mat of claim 69 wherein the binder is cured sufficiently that the wet tensile strength divided by the dry tensile strength times 100 equals at least about 35 percent.

90. (Previously presented) The mat of claim 70 wherein the binder is cured sufficiently that the wet tensile strength divided by the dry tensile strength times 100 equals at least about 35 percent.

91. (Currently amended) A nonwoven mat having a basis weight in the range of about 2.45 +/- 0.75 lbs./100 sq. ft., a unique high flame resistance and unexpected tensile strength, flex and recovery properties after scoring and folding comprised of a blend of fibers comprised of about 84 to about 92 wt. percent of chopped glass fibers having an average fiber diameter in the range of about 13 to about 17.5 ~~16 +/- 1.5~~ microns and lengths within the range of about 0.7 and about 1.25 inches and about 8 to about 16 wt. percent of polyester fibers having a length of about 0.25 +/- 0.07 inch, the fibers being bound together with about 20 to about 30 wt. percent, based on the dry weight of the mat, of a cured resin derived from an aqueous homopolymer or copolymer of polyacrylic acid and a polyol, , with or without a polycarboxy polymer, the mat having a Taber Stiffness of at least about 50 gram centimeters and passing the National Fire Protection Association's (NFPA) Method #701 Flammability Test.

92.(Currently amended) The mat of claim 91 wherein the average molecular weight of the polyacrylic acid polymer is about 3000 or less wherein the binder is cured sufficiently that the wet tensile strength divided by the dry tensile strength times 100 equals at least about 35 percent.

93.(Currently amended) The mat of claim 91 wherein the polyol is triethanolamine, the glass fibers have a diameter of about 16 +/- 1.5 microns and the mat has an air permeability in the range of about 500 – 700 CFM/sq. ft.

94.(Currently amended) The mat of claim 92 wherein the polyol is triethanolamine, the glass fibers have a diameter of about 16 +/- 1.5 microns and the mat has an air permeability in the range of about 500 – 700 CFM/sq. ft.

95 - 98. (Cancelled)

99. (New) A nonwoven mat having high flame resistance and unexpected tensile strength, flex and recovery properties after scoring and folding comprised of a blend of fibers comprised of about 84 to about 92 wt. percent of chopped glass fibers having an average fiber diameter in the range of about 13 to about 17.5 microns and lengths within the range of about 0.7 and about 1.25 inches and about 8 to about 16 wt. percent of polyester fibers having a length of about 0.25 +/-0.07 inch, the fibers being bound together with about 20 to about 30 wt. percent, based on the dry weight of the mat, of a cured resin derived from an aqueous homopolymer or copolymer consisting essentially of polyacrylic acid and a polyol, with or without a polycarboxy polymer, wherein the binder is cured sufficiently that the wet tensile strength divided by the dry tensile strength times 100 equals at least about 35 percent, the mat passing the National Fire Protection Association's (NFPA) Method #701 Flammability Test, and the mat having an air permeability in the range of about 500 – 700 CFM/sq. ft.